

Introduction to the course

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Faculty of Environmental Design
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Room 103



Overview

- Course objectives
- Instructor
- Getting help
- Required skills – before you start
- Course structure
- Grading and evaluation
- Required media



Course objectives

1. Understand the nature of Remote Sensing data and how they are acquired
2. Understand different types of Remote Sensing instruments and their missions
3. Understand basic image representation and processing



Course objectives

- 4. Understand how Remote Sensing data can be combined with other sources of data and data techniques (e.g. GIS)
- 5. Understand how Remote Sensing data can be used in environmental science (particularly via classification and monitoring)

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Instructor

- Dr. Ragab Khalil
 - Associate professor in Faculty of Environmental Design
 - Office: FED - Room # 103.
 - E-mail: rkmm99@hotmail.com
 - Lectures & Lab. (FED - Room # 108):
 - Wednesday (10:00 – 12:50 a.m.),
 - Office Hours:
 - Saturday (10:00 – 12:00 a.m.).
 - Course webpage:
 - <http://rmohamed.kau.edu.sa>

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Getting help

- Class e-mail list: rkmm99@hotmail.com
- Send all technical questions
- Response will be to list, rather than individuals
- Benefit to everyone

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Required skills – before you start (by the end of week 1)

- Basic familiarity with word processor and Excel
- Comfortable with the Windows9X, NT, 2000, or XP OS, esp. *hierarchical file structures* and the *Windows Explorer*
- Basic working knowledge of algebra, trigonometry, and coordinate geometry
- Basic familiarity with maps and map reading
- **E-mail Account**
- Use a Web browser, including file downloading

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Course structure

- One lecture and one lab session (in the same day)
- Topics introduced in lecture are explored in lab session
- Periodic assignments (2 assignments)
- 2 quizzes
- Midterm Exam
- Final exam

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Detailed schedule 1

Week	Date	Reading Assign.	Subject	Lab Exercises
1	10/03			
2	17/03		Course Introduction	
3	24/03	L&K 401-404	Introduction to RS	
4	01/04	L&K 1-23	Electromagnetic Radiation (EMR)	Introduction to ERDAS IMAGINE:
5	08/04	L & K 397-490	Satellites and Sensors	Display Functions in Imagine

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Detailed schedule 2

Week	Date	Reading Assign.	Subject	Lab Exercises
6	15/04	H.Out 3	1st Quiz Visual Interpretation of images	Visual interpretation
7	22/04	L&K 495-507	Image Geometric correction	Image rectification
8	29/04		Midterm Exam	
9	07/05		Vacation	
10	14/05	L&K 550-586	Image classification (USC)	Unsupervised classification

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Detailed schedule 3

Week	Date	Reading Assign.	Subject	Lab Exercises
11	21/05	L&K 550-586	Image classification (SC)	Supervised classification
12	28/05	L&K 586-593	2nd Quiz - Classification accuracy assessment	Accuracy assessment
13	05/06	L&K 593-610	Data merging and GIS integration	Thematic map & GIS
14	12/06		Map composition	Map composition
15	19/06		Review	
16	26/06		Final Exam	

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Grading and evaluation

Exam	Marks	Date	
1st Quiz	5	15/04	March 31
Midterm Exam	15	29/04	April 14
2nd Quiz	5	28/05	May 12
Final Exam	35	26/06	June 09
Lab Exercises 10@2 pts	20	Due date	
Assignments 2@10 pts	20	Due date	

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Media

- Required:
 - Access to computers running ERDAS IMAGINE 9.1
 - Access to WWW
 - 1 USB drive

• Text and Readings

- Lillesand T.M., Kiefer R.W. and Chipman J.W.: 2004
 ‘Remote Sensing and Image Interpretation’. Fifth Edition, New York: John Wiley & Sons. 763 p.

- *The given handouts*

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Class policies

- Attendance:
 - All students are required to attend all classes and laboratories.
 - Attendance will be taken during each class session.
 - Appropriate actions will be taken when students are absent for more than 25% of the course.
 - Good behavior in the classroom is expected from all students.
 - Students who engage in unacceptable behavior will be asked to leave the class.

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Class policies

- Attendance:
 - No Sleeping, Eating, Drinking or chewing in the class.
 - Turn off all cell phones and Other electronic devices before class.
 - During the lecture, feel free to ask questions, but refrain from conducting personal conversations.
 - When you leave the classroom, please pick up after yourself. Try to leave the room cleaner than when you found it.

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Class policies

- Lab Exercises & Assignments:
 - This course will include several laboratory exercises and homework assignments
 - Laboratory exercises will account for 20% of the final grade.
 - Assignments will account for 20% of the final grade.
 - It is important that students complete their assignments accurately, neatly, and submit them on time.
 - Assignments received past the due date will be devalued 5% for each day that the item is late.

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Class policies

- Examinations & Academic honesty :
 - Class examinations will cover class and laboratory material, homework and Laboratory assignments, and assigned readings.
 - The College imposes specific actions in response to incidents of cheating and academic dishonesty.
 - These procedures will be followed and appropriate actions will be taken if these events were to occur.

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Lab

- Prepare your computer
- Check the software
- Make your own folder under C:\temp\101_RSS2010
- E-mail account

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